Solitary Neurofibroma of the Hard Palate: An Atypical Intraoral Presentation

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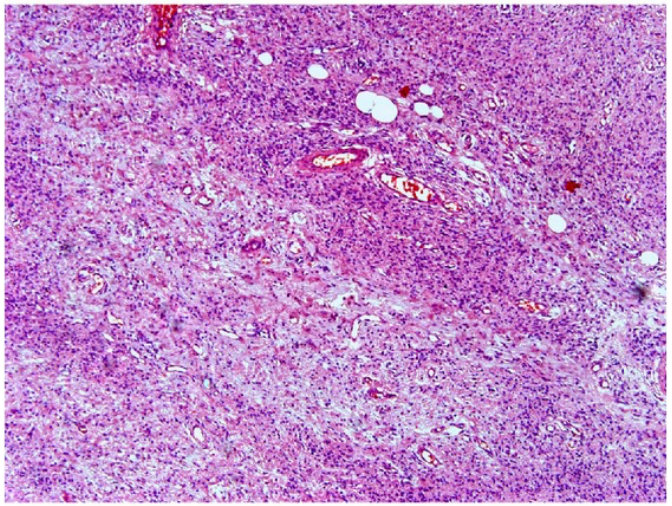
Introduction:

Neurofibromas are common peripheral nerve sheath tumors but represent only 6.5% of intraoral neurogenic tumors (1), with fewer than 10 cases reported on the hard palate (2). They can occur sporadically or as part of NF-1, an autosomal dominant condition associated with benign brain tumors but only rarely glioblastoma. Neurofibromas differ from schwannomas histologically: they are positive for S-100 and CD34, while schwannomas are CD34-negative (3). Solitary neurofibromas are less likely to become malignant but still require follow-up due to potential recurrence. Surgical excision requires wide margins due to the absence of a capsule (1).

Patient Description:

Patient is a 51-year-old female with no prior medical history who presented with a complaint of a lesion of her hard palate for 12-18 months. The lesion was non-painful and stable in size. The lesion was subsequently biopsied by oral surgery and was found to have a solitary neurofibroma. She was evaluated by dermatology and did not have stigmata of neurofibromatosis on examination. In addition, she was referred to otolaryngology who recommended removal, however the patient opted to conservatively monitor the lesion. She planned to undergo genetic testing given her oral fibroma and family history of glioblastoma in her mother and father.

Histology:



Histologic section of neurofibroma of the hard palate (4). As shown above, the connective tissue is highly cellular with spindle-shaped cells and wavy nuclei. This histology would look similar to the expected result in this patient who has a similar presentation.

Unique Aspects of Case:

This case is unique due to the patient's age (most present between 20–30 years old) (5), the rare location, and the absence of NF-1 features. This patient did not meet diagnostic criteria for NF-1, however, her personal history of neurofibroma and family history of glioblastomas are suspicious for NF1; thus she will undergo further genetic testing.

Conclusions:

Recommended evaluation includes biopsy with immunohistochemical staining (S-100+, CD34+) and possible MRI to assess nerve involvement (7). While NF-1 is typically diagnosed clinically, genetic testing may be appropriate in select cases (8). Excision is generally advised given uncertainty of malignancy and recurrence risk (6), with recommended horizontal margins of 0.2 cm including mucosa and periosteum (2). This case highlights the variability in presentation and management of solitary neurofibromas. Conservative observation may be appropriate in low-risk cases and offers insight into the natural history of this uncommon tumor.

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